

WHAT IS CLAIMED IS:

5 1. A diffuser-augmented wind-turbine assembly, the
assembly having an diffuser outer-housing shell with a
cylindrical portion rotatably supporting a rotor drum having
an inner surface rigidly supporting a plurality of turbine
blades, the rotor drum being in driving engagement with a
10 rotatable electrical generator.

 2. The assembly of claim 1, wherein the rotor-drum
inner surface is flush with adjoining inner surfaces of the
diffuser shell.

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 3. The assembly of claim 1, wherein the rotor drum and
turbine blades are ingerally formed.

 4. The assembly of claim 1, wherein the electrical
20 generator comprises a cylindrical magnet assembly secured to
an outer surface of the rotor drum to rotate therewith, and a
cylindrical stator-coil assembly secured to an inner surface
of the diffuser shell, and extending around and slightly
spaced from the magnet assembly.

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 5. The assembly of claim 1, and further comprising
space-apart ring bearings adjacent opposite ends of the rotor
drum for rotatably supporting the drum within the diffuser
shell.

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 6. The assembly of claim 1, and further comprising a
plurality of inlet guide vanes secured within an inlet end of
the diffuser shell upstream of the turbine blades.

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7. The assembly of claim 1, wherein the electrical
generator is drum shaped, and secured to the diffuser shell
5 radially outwardly of the rotor drum, and further comprising
a flexible belt engaged with the drum and generator.

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